A. SUMMARY

The existing noise environment on the CCSF Main Campus is typical of an urban college campus. Buildout of the Main Campus Master Plan would generate short-term construction noise and might generate groundborne vibration that could affect campus facilities, nearby residences and schools, and other sensitive receptors; this impact would be significant. Implementation of measures identified in this EIR would reduce impacts related to short-term construction noise and groundborne noise and vibration, but given the extended duration of construction associated with multiple projects, these impacts would remain significant. Noise levels from project traffic would not expose proposed campus facilities to noise levels above 70 dBA; therefore, impacts related to on-site noise exposure would be less than significant. Project-generated and cumulative traffic would not result in any significant noise increases at any off-site receptors along area roadways; therefore, impacts related to off-site noise would be less than significant. Increased activity on the Main Campus associated with the Master Plan (e.g. students talking, cars parking, use of athletic facilities) would result in noise of similar type and magnitude to existing noise, and would not result in any significant impacts to on-or off-site receptors (though there could be increased noise that causes nuisance and annoyance in the adjacent neighborhoods).

B. INTRODUCTION

Vehicles and equipment associated with construction and demolition of buildings would generate temporary noise that could affect noise-sensitive receptors both on- and off-site. Over the longer term, the project could contribute to an increase in ambient noise. Specifically, project traffic, freight loading and stationary mechanical equipment on the campus could affect noise levels. The following discussion provides a more detailed assessment of potential direct and indirect noise impacts associated with project construction and project operation.

B1. Introduction to Noise

Noise is defined as unwanted sound that disrupts normal activities or that diminishes the quality of the environment. It is usually caused by human activity that adds to the natural acoustic setting of a locale. Noise sources that contribute to regional ambient noise levels are typically transportation-related (mobile) sources, including vehicular traffic, trains, ship traffic, and aircraft overflights. In contrast, noise sources that contribute to local ambient noise levels are generally from point sources, including construction sites, industrial sites, or other places where heavy equipment or noise-generating machinery is used.

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air, whereas noise is unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation,
and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The ratio of the unit of sound pressure to the faintest level detectable by a young person with good hearing is called a decibel. The decibel (dB) scale is used to quantify sound intensity. Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," written as dBA.

Environmental noise is measured in units of dBA. The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness; a 5-dBA increase is a readily noticeable change, and a 3-dBA increase is barely noticeable to most people.

When assessing community reaction to noise, there is an obvious need for a scale that averages varying noise exposure over time and quantities the result in terms of a single number descriptor. Two of these noise-level scales are the Equivalent Noise Level (Leq) and the Community Noise Equivalent Level (CNEL). Leq is the average A-weighted sound level measured over a given time interval. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that for planning purposes, an artificial dB increment be added to quiet-time noise levels in a 24-hour noise descriptor (the CNEL). CNEL adds a 5-dBA penalty during the evening hours (7:00 PM to 10:00 PM) and a 10-dBA penalty during the nighttime hours (10:00 PM to 7:00 AM). Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL. Although both add a 10-dBA penalty to all nighttime noise events between 10:00 PM and 7:00 AM, Ldn does not add the evening 5-dBA penalty. In practice, Ldn and CNEL usually differ by less than 1 dBA at any given location for transportation and other semi-steady-state noise sources.

Human response to noise varies from individual to individual and depends on the ambient environment in which the noise is perceived. The same noise that would be highly intrusive to a sleeping person or someone in a quiet park might be barely perceptible at an athletic event or in the middle of the freeway at rush hour. Therefore, planning for an acceptable noise exposure must take into account the types of activities and corresponding noise sensitivity in a specified location for each particular set of land uses. Some general guidelines are as follows: sleep disturbance may occur at less than 50 dBA, interference with human speech begins at around 60 dBA, and hearing damage may result from prolonged exposure to noise levels in excess of 90 dBA. Solid walls, berms, or elevation differences typically reduce noise
levels by 5.0 to 10.0 dBA.\(^1\) Sound levels for a source may also be attenuated 3.0 to 5.0 dBA by a first row of houses and 1.5 dBA for each additional row of houses.\(^2\)

### B2. Noise Analysis Methodology

The analyses of the existing and future noise environments presented in this EIR section are based on technical reports, noise prediction modeling, and noise level monitoring. Noise prediction modeling was based on the Federal Highway Administration (FHWA) Highway Noise Prediction Model. Noise level monitoring was conducted by Impact Sciences, using a Larson-Davis 720, Type II sound level meter). In addition, historic noise levels for some intersections were available from the *City of San Francisco General Plan*, and are cited in the Setting below.

#### On-Site (On-Campus) Methodology

The primary concern regarding on-site noise is the potential for on-site land uses to be exposed to noise levels that exceed adopted thresholds. In essence, the analysis of on-site noise levels assesses the compatibility of proposed on-site land uses with proposed on-site activities, adjacent off-site land uses and activities, and with roadway traffic noise that would occur proximal to the site.

#### Off-Site (Off-Campus) Methodology

The assessment of off-site noise levels focuses on how on-site activities and increased traffic levels would affect existing land uses adjacent to, or near, the project site. This section specifically focuses on impacts to existing noise-sensitive uses, or those uses that would be most sensitive to an increase in noise levels. These uses are discussed later in the EIR section. Noise levels were modeled with and without project traffic to determine those locations at which the project (via increased traffic) may have had an impact on existing noise sensitive uses.

### C. EXISTING CONDITIONS

#### C1. Existing Noise Environment

The existing ambient noise environment in the project vicinity is typical of many areas in San Francisco, dominated by vehicular traffic including cars, trucks, and MUNI buses. The Environmental Protection

---

Element of the *San Francisco General Plan* indicates that major thoroughfares in the campus vicinity were subject to following background noise levels of 75 to 80 dBA (Ldn) in 1974, as follows:

<table>
<thead>
<tr>
<th>Street</th>
<th>Noise Level (Ldn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean Avenue</td>
<td>75 dBA</td>
</tr>
<tr>
<td>I-280</td>
<td>80 dBA</td>
</tr>
</tbody>
</table>

The noise environment in the CCSF Main Campus vicinity varies with proximity to these major roadways.

In order to characterize the current noise environment on the campus and in the vicinity, short-term 20-minute noise measurements were taken at four on-campus locations and four off-campus locations on October 23rd and 28th, 2003. The measurement results are summarized in Table 4.4-1, *Existing Measured Noise Levels in Campus Area*, and measurement locations are indicated on Figure 4.4-1, *Noise Measurement Locations*. Based on standard distance attenuation rates, noise measurement data, and the results of noise prediction modeling, it is estimated that noise levels continue at 75 dBA (Ldn or CNEL) or less adjacent to Ocean Avenue and 80 dBA (Ldn or CNEL) or less near I-280. The noise environment in the campus vicinity is characterized by short-term noise levels ranging from 51.3 to 70.5 dBA. The locations with the highest measurements are associated with traffic and bus stops.

### Table 4.4-1
**Existing Measured Noise Levels in Campus Area**

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration</th>
<th>Location</th>
<th>Leq, dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 23, 2003</td>
<td>4:12PM-4:32PM</td>
<td>1. On top of western berm at center of reservoir (on-campus)</td>
<td>51.3</td>
</tr>
<tr>
<td></td>
<td>4:43PM-5:02PM</td>
<td>2. On top of eastern berm at center of reservoir (on-campus)</td>
<td>56.7</td>
</tr>
<tr>
<td></td>
<td>5:15PM-5:32PM</td>
<td>3. E-Lot (on-campus)</td>
<td>59.6</td>
</tr>
<tr>
<td></td>
<td>5:38PM-5:58PM</td>
<td>4. Havelock Street (off-campus)</td>
<td>63.7</td>
</tr>
<tr>
<td>October 28, 2003</td>
<td>4:07PM-4:27PM</td>
<td>5. Foerster Street (off-campus)</td>
<td>70.5</td>
</tr>
<tr>
<td></td>
<td>4:33PM-4:51PM</td>
<td>6. Marston Avenue (off-campus)</td>
<td>55.7</td>
</tr>
<tr>
<td></td>
<td>5:03PM-5:20PM</td>
<td>7. Ocean Avenue (off-campus)</td>
<td>66.3</td>
</tr>
<tr>
<td></td>
<td>5:33PM-5:52PM</td>
<td>8. Practice Field (on-campus)</td>
<td>51.3</td>
</tr>
</tbody>
</table>

Source: Impact Sciences, Inc.

Notes: Measurements were taken using a Larson Davis 720 SLM Noise Meter with a Type II Microphone. Measurement locations are indicated on Figure 4.4-1.
In addition to noise measurement, noise prediction modeling was conducted to determine the existing noise levels near the campus. Noise prediction modeling procedures involved the calculation of existing vehicular noise levels near the following intersections:

- Judson Avenue and Phelan Avenue;
- Ocean Avenue and Phelan Avenue;
- Ocean Avenue and I-280 ramps;
- Geneva Avenue and Ocean Avenue;
- Geneva Avenue and I-280 ramps; and,
- Geneva Avenue and Howth Street.

The FHWA model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. Traffic volumes utilized as data inputs into the noise prediction model were provided by DKS Associates and are consistent with the traffic and circulation analysis provided in Section 4.3, Transportation and Circulation of this EIR. These calculations are based on a distance of 50 feet from the center of the roadway and do not account for the locations of land uses or attenuation from barriers (i.e., walls or fences) or topography. Due to the variations in setbacks and design for many of the buildings along the study roadways, this analysis does not attempt to determine the ambient noise levels at the nearby land uses. Table 4.4-2, Existing Exterior Noise Levels, shows the results of the calculations.

C2. On-Campus Noise Levels

Main Campus facilities include (among others) academic and administrative buildings, a library, cafeteria, athletic fields, and associated parking lots. Athletic facilities in the east and southeast parts of the campus are used by students and community members for team practices, sporting events, and other recreational activities. In addition, the walkways around the top of the reservoir berms and the streets and sidewalks surrounding the campus and its facilities are frequently used by campus neighbors and other members of the public.
<table>
<thead>
<tr>
<th>Location</th>
<th>Roadway Segment</th>
<th>Adjacent Land Uses</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phelan/Ocean</td>
<td>Phelan north of Ocean</td>
<td>Fire station, California Bookstore, Conlan Hall, A Lot</td>
<td>65.2</td>
</tr>
<tr>
<td></td>
<td>Ocean east of Phelan (use Ocean east of Geneva)</td>
<td>Conlan Hall, H Lot, residential</td>
<td>66.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Phelan</td>
<td>Fire station, MUNI yard, commercial</td>
<td>67.4</td>
</tr>
<tr>
<td>Phelan/Judson</td>
<td>Phelan north of Judson</td>
<td>Residential</td>
<td>60.7</td>
</tr>
<tr>
<td></td>
<td>Phelan south of Judson</td>
<td>Riordan High School, Bungalows, E Lot</td>
<td>63.9</td>
</tr>
<tr>
<td></td>
<td>Judson east of Phelan</td>
<td>F Lot, residential</td>
<td>62.6</td>
</tr>
<tr>
<td>I-280NB/Ocean</td>
<td>I-280NB on-ramp north of Ocean</td>
<td>Balboa Park</td>
<td>63.6</td>
</tr>
<tr>
<td></td>
<td>Ocean east of I-280NB</td>
<td>Balboa Park, MUNI yard / BART station</td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td>Ocean west of I-280NB</td>
<td>Freeway overpass</td>
<td>66.2</td>
</tr>
<tr>
<td>I-280SB/Ocean</td>
<td>I-280SB off-ramp north of Ocean</td>
<td>J Lot, Shop and Warehouse</td>
<td>63.0</td>
</tr>
<tr>
<td></td>
<td>Ocean east of I-280SB</td>
<td>Freeway overpass</td>
<td>66.1</td>
</tr>
<tr>
<td></td>
<td>Ocean west of I-280SB</td>
<td>Practice field, Lick-Wilmerding High School</td>
<td>67.9</td>
</tr>
<tr>
<td>Geneva/Ocean</td>
<td>Geneva south of Ocean</td>
<td>Residential</td>
<td>64.4</td>
</tr>
<tr>
<td></td>
<td>Ocean east of Geneva</td>
<td>Conlan Hall, H Lot, residential</td>
<td>66.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Geneva (use Ocean west of Phelan)</td>
<td>Fire station, MUNI yard, residential, commercial</td>
<td>67.4</td>
</tr>
<tr>
<td>Howth/Geneva</td>
<td>Howth north of Geneva</td>
<td>Residential</td>
<td>58.2</td>
</tr>
<tr>
<td></td>
<td>Howth south of Geneva</td>
<td>Residential</td>
<td>59.6</td>
</tr>
<tr>
<td></td>
<td>Geneva west of Howth</td>
<td>Residential</td>
<td>65.8</td>
</tr>
<tr>
<td></td>
<td>Geneva east of Howth</td>
<td>Residential</td>
<td>64.5</td>
</tr>
<tr>
<td>I-280NB/Geneva</td>
<td>I-280NB on-ramp north of Geneva</td>
<td>BART / MUNI</td>
<td>60.8</td>
</tr>
<tr>
<td></td>
<td>I-280NB off-ramp south of Geneva</td>
<td>BART / MUNI</td>
<td>65.3</td>
</tr>
<tr>
<td></td>
<td>Geneva east of I-280NB</td>
<td>BART / MUNI</td>
<td>68.6</td>
</tr>
<tr>
<td></td>
<td>Geneva west of I-280NB</td>
<td>Freeway overpass</td>
<td>68.5</td>
</tr>
<tr>
<td>I-280SB/Geneva</td>
<td>I-280SB off-ramp north of Geneva</td>
<td>Lick-Wilmerding High School</td>
<td>64.0</td>
</tr>
<tr>
<td></td>
<td>I-280SB on-ramp south of Geneva</td>
<td>Residential</td>
<td>64.1</td>
</tr>
<tr>
<td></td>
<td>Geneva east of I-280SB</td>
<td>Freeway overpass</td>
<td>68.3</td>
</tr>
<tr>
<td></td>
<td>Geneva west of I-280SB</td>
<td>Lick-Wilmerding High School, residential</td>
<td>67.8</td>
</tr>
</tbody>
</table>

Source: Impact Sciences, Inc. Calculations are in Appendix 4.4.
4.4 Noise

The principal vehicular thoroughfares adjacent to or near the campus include Phelan Avenue, Ocean Avenue, Geneva Avenue, and I-280. Traffic on these roadways contributes to the noise environment on the campus. The parking lots on campus are the dominant (area) sources of noise. Point sources of noise are generated by on-site student and staff activities. These noise sources typically include people talking, crowds cheering at athletic events, doors closing, equipment and machinery used on campus, landscaping and maintenance equipment operation, car/personal stereos, occasional auto alarms, etc. In addition, an amplified public address system is used at sporting events held in the stadium during the afternoon and evening.

Noise measurements were taken at four on-campus locations, as listed in Table 4.4-1. The existing short-term noise levels near the reservoir parking lots (east and west berm) west of Phelan Avenue did not exceed 57.0 dBA. The primary sources of noise measured included idling cars, opening and closing of doors, voices and whistles/shouting from Riordan High School. The short-term noise level measured across the street, within the E Lot north of the Arts Extension, was 59.6 dBA. This higher noise level could be attributed to a greater number of pedestrians passing by and increased traffic noise along Judson Avenue and Phelan Avenue. The short-term noise level measured at the practice field was 51.3 dBA and consisted of traffic noise from the nearby off-ramp from I-280 onto Ocean Avenue, and the adjacent parking lot for the campus library.

The calculated noise levels along the roadways adjacent to the campus are shown in Table 4.4-2. The calculations are based on existing peak-hour traffic counts taken for the traffic study. The existing noise levels along Phelan Avenue, Ocean Avenue, Judson Avenue, and the I-280 off-ramp adjacent to the campus range from 62.6 to 68.6 dBA. Existing campus facilities are set back various distances from these roadways, so the existing noise levels at those facilities vary.

C3. Off-Campus Noise Levels

Vehicular traffic is the dominant source of noise affecting uses in the immediate vicinity of the campus. Hilly topography in the project vicinity causes noise levels to vary considerably, and noise levels for sensitive receptors can be substantially lower in areas sheltered from traffic noise (e.g., residences to the west of the western reservoir berm and along the ridge north of Marston Avenue).

Noise measurements were taken at four locations off campus, as shown in Table 4.4-1. Havelock Street and Marston Avenue are residential streets that connect to the northeast part of the campus. The measured noise levels at these locations were 63.7 and 55.7 dBA, respectively. The primary sources of noise consisted of vehicles traveling at low speed and pedestrians walking by occasionally. The two streets are also in proximity to the campus stadium. Foerster Street intersects Judson Avenue at the northern end of campus. The highest noise level measured was recorded at this location, and could be attributed to vehicle noise and a bus stop. Ocean Avenue runs along the southern border of the campus;
the noise level measured adjacent to this roadway was 66.3 dBA. The primary source of noise on this road was vehicles.

The calculated noise levels along the roadways adjacent to and near the campus are shown in Table 4.4-2. The roadway segments of most concern from a noise impact standpoint are those with adjacent noise-sensitive land uses (defined in the following sub-section): Ocean Avenue near Phelan Avenue; Phelan and Judson Avenues; Ocean Avenue west of I-280; Geneva and Ocean Avenues; Geneva Avenue and Howth Street; and I-280 SB ramp at Geneva. Calculated noise levels along those segments range from 58.2 dBA to 68.6 dBA. As noted previously, the actual noise levels experienced at a particular land use depend on the distance from the roadway, topography, and presence of any barriers.

C4. Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hospitals, and nursing homes are considered to be the most sensitive to noise.

Existing sensitive receptors include academic facilities on the Main Campus, specifically Cloud Hall, Science Building, Batmale Hall, the Creative Arts complex, Visual Arts, Environmental Horticulture, and classrooms in bungalows throughout the campus. The Library is also considered a sensitive receptor, as is the Child Development facility. Administrative offices and support/operational functions on the campus are not considered to be as noise sensitive. Existing sensitive receptors adjacent to or near the campus include residential uses along Judson Avenue, Marston Avenue, Havelock Street, Ocean Avenue, and Plymouth Avenue (west of the reservoir), as well as residences along some of the connecting streets. Other sensitive receptors include Riordan High School and Lick-Wilmerding High School, and a child care center west of the campus on Ocean Avenue.

D. EXISTING PLANS, POLICIES AND REGULATIONS

As an entity within the State California Community Colleges system, CCSF is generally not subject to local regulations. In addition, CCSF may choose to exempt itself from local planning and zoning requirements with respect to classroom uses. Therefore, the following information regarding the City and County of San Francisco planning/regulatory context is not necessarily applicable to the Master Plan, and is presented for informational purposes.
D1. California Department of Health Services

Figure 4.4-2, Noise/Land Use Compatibility Guidelines, shows the recommended noise levels compatible with different types of land use, based on the guidelines of the Office of Noise Control, State Department of Health Services and published in the Environmental Protection Element of the San Francisco General Plan. As shown, 60 dBA CNEL is the acceptable exterior noise level for residential dwellings involving normal, conventional construction, without any special noise insulation requirements (normally acceptable noise levels). For noise-sensitive uses such as schools, libraries, churches, hospitals, day care centers, and nursing homes of conventional construction, an exterior noise level of 65 dBA CNEL is considered acceptable. However, the land use compatibility guidelines published by the State Office of Noise Control indicate that an exterior noise level of up to 70 dBA is considered acceptable at school sites.3

Title 24, Part 2 of the California Code of Regulations contains requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards. For limiting noise transmitted from exterior sources, the Standards set forth an interior standard of 45 CNEL in any habitable room with all doors and windows closed, and require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard (where such units are proposed in areas subject to transportation noise levels greater than 60 CNEL). Title 24 standards are enforced through the building permit application process in San Francisco, as in most jurisdictions.

D2. San Francisco Police Code

Sections 2907 and 2908 of Article 29 of the San Francisco Police Code regulate construction equipment and construction work at night. Section 2907(b) states “it shall be unlawful for any person, including the City and County of San Francisco, to operate any powered construction equipment, regardless of age or date of acquisition, if the operation of such equipment emits noise at a level in excess of 80 dBA when measured at a distance of 100 feet from such equipment, or an equivalent sound level at some other convenient distance.” Exemptions to this requirement include impact tools and equipment, pavement breakers and jackhammers. The Ordinance does require that such equipment be equipped with intake/exhaust mufflers and/or acoustically attenuating shields/shrouds recommended by the manufacturer and approved by the Director of Public Works to best accomplish maximum noise attenuation.

The noise generated by nighttime construction work is regulated by Section 2908 of the Police Code. Specifically, this section prohibits any person, between the hours of 8:00 PM of any day and 7:00 AM of the following day, to erect, construct, demolish, excavate for, alter, or repair any building or structure if the noise level created is in excess of the ambient noise level by 5 dBA at the nearest property line unless a special permit therefore has been applied for and granted by the Director of Public Works.

D3. San Francisco General Plan

Transportation noise is addressed in the Environmental Protection Element of the San Francisco General Plan. The following are the relevant transportation noise policies in the General Plan. (Project consistency with relevant General Plan policies is discussed in Section 4.1, Land Use and Planning.)

Reduction of Transportation Noise


Policy 9.2: Impose traffic restrictions to reduce transportation noise.

Policy 9.6: Discourage changes in streets which will result in greater traffic noise in noise sensitive areas.

Minimize the Impact of Noise on Affected Areas

Policy 10.1: Promote site planning, building orientation and design, and interior layout that will lessen noise intrusion.

Policy 10.2: Promote the incorporation of noise insulation materials in new construction.

Policy 10.3: Construct physical barriers to reduce noise transmission from heavy traffic carriers.

Promote Land Uses That are Compatible with Various Transportation Noise Levels

Policy 11.1: Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use.

Policy 11.2: Consider the relocation to more appropriate areas of those land uses which need more quiet and cannot be effectively insulated from noise in their present location, as well as those land uses which are noisy and are presently in noise sensitive areas.

Policy 11.3: Locate new noise-generating development so that the noise impact is reduced.

4 The Environmental Protection Element was amended by resolution 13941 on August 17, 1995.
5 For discussion of these policies please refer to the Environmental Protection Element.
E. SIGNIFICANCE THRESHOLDS

For purposes of this EIR, thresholds were used from both the City and County of San Francisco Initial Study Checklist and Appendix G of the CEQA Guidelines (Environmental Checklist Form).

The environmental checklist used by the City and County of San Francisco includes the following criteria for determining whether a project could have a significant noise impact:

Could the project:

a. Substantially increase the ambient noise levels for adjoining areas?

b. Violate Title 24 Noise Insulation Standards, if applicable?

c. Be substantially impacted by existing noise levels?

Appendix G of the CEQA Guidelines (Environmental Checklist Form) lists the following items to be considered when determining whether a project could have a significant effect on the environment:

Would the project result in:

• Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;

• Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;

• A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

• A substantial temporary or periodic increase in ambient noise levels in the project above levels existing without the project;

• Exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport; or

• Exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

If implementation of the project exceeds any of the standards outlined above, the project would result in a significant impact.

The following analysis addresses potential impacts related to construction noise, on-site noise exposure, and increases in off-site ambient noise levels. The significance criteria for those types of impacts are further defined below. The Main Campus is not within an airport land use plan area or near a private airstrip.
E1. Construction Noise

The City has not adopted significance thresholds for noise impacts, but the significance of construction-related noise impacts has been determined by comparing construction-related noise levels with the following applicable noise standards and guidelines.

City Noise Ordinance. Noise generated by construction equipment (other than impact tools) is regulated by the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code) and ordinance limits are used to determine the significance of project-related construction noise increases. During the daytime hours (7:00 AM to 8:00 PM), the maximum noise level permissible during construction in the City is 80 dBA, when measured at 100 feet from the noise-generating equipment. During the nighttime (8:00 PM to 7:00 AM) the Police Code prohibits construction noise that exceeds the ambient noise level by 5 dBA at the nearest property line.

Speech Interference Criterion. Noise peaks generated by construction equipment result in temporary disturbance (e.g., speech interference) to persons in adjacent buildings if the noise levels in the interiors of the buildings exceed 45 to 60 dBA. A typical building can reduce noise levels by 20 to 25 dBA with the windows closed, although the actual noise attenuation may vary depending on building construction and design. This noise reduction could be maintained only on a temporary basis in some cases since it assumes windows must remain closed at all times. Assuming a 20-dBA reduction with the windows closed, an exterior noise level of 80 dBA at receptors would maintain a marginally acceptable interior noise environment for normal conversation. It should be noted that such noise levels would be sporadic rather than continuous in nature because different types of construction equipment would be used throughout the construction process. Also, use of any given noise-generating equipment would be intermittent.

Based on these standards and guidelines, the project could cause significant construction-noise impacts if it generated (1) daytime construction noise of 80 dBA when measured at 100 feet (if it could affect sensitive receptors), (2) nighttime construction noise that exceeds the ambient noise level by 5 dBA at the nearest property line of a sensitive receptor, or (3) exterior noise levels of 80 dBA at the nearest sensitive receptors.

---

6 Although the standard is defined in terms of a noise limit at 100 feet, this standard can be adjusted for shorter distances such as 50 feet. While noise attenuation rates at distances of less than 50 feet can vary due to localized effects such as noise reflection off buildings or topography as well as noise shielding from topography or buildings, the standard attenuation rate for noise levels from a point source is 6 dBA per doubling of distance. When this rate is applied to the City noise limit, the equivalent City noise limit for construction equipment at 50 feet is 86 dBA.

7 In indoor noise environments, the highest noise level that permits relaxed conversation with 100 percent intelligibility throughout the room is 45 dBA. Speech interference is considered to become intolerable when normal conversation is precluded at three feet (talker-listener separation) which occurs when background noise levels exceed 60 dBA. In outdoor environments, the highest noise level that permits normal conversation at three feet with 95 percent sentence intelligibility is 66 dBA (U.S. Environmental Protection Agency, 1974).
E2. Operational Noise

**On-Site (On-Campus) Thresholds**

According to the State Land Use Compatibility Guidelines for Noise (discussed above), school uses are “normally acceptable” with exterior noise levels of up to 70 dBA CNEL. Given this, for purposes of this EIR, the project would result in a significant noise impact if exterior locations around new campus academic buildings would be exposed to noise levels above 70 dBA CNEL. For auditoriums, concert halls, and amphitheaters, the State noise guidelines identify 70 dBA CNEL as a maximum “conditionally acceptable” exterior noise level. For purposes of this EIR, the project would result in a significant noise impact if the proposed campus theatre uses would be exposed to exterior noise above 70 dBA CNEL.

**Off-Site (Off-Campus) Thresholds**

Off-site noise thresholds consider both the San Francisco General Plan (see Figure 4.4-2) and State noise compatibility guidelines, and community response to changes in noise levels. As noted earlier, although the College itself is not within the jurisdiction of the City and County of San Francisco, the land uses adjacent to and near the Main Campus are within the City’s jurisdiction. Traffic would be the primary noise source affecting the sensitive receptors in the vicinity of the campus. The General Plan (see Figure 4.4-2) specifies 60 dBA CNEL as the acceptable exterior noise level for single-family residences and 65 dBA as the acceptable level for other noise-sensitive uses; this noise level will be utilized to evaluate impacts to off-site noise-sensitive uses.

The human ear typically does not notice changes in a noise level of less than three dBA. Some individuals may notice changes from three to five dBA if they are extremely sensitive to changes in noise. A five-dBA increase is readily noticeable. Based on this information, the following thresholds have been established for this analysis:

1. An increase of five dBA or greater in ambient noise level that occurs from project-related activities would be considered significant.

2. An increase of three dBA or greater in noise level that occurs from project-related activities would be significant if the resulting noise levels exceed the General Plan noise compatibility guidelines for noise-sensitive uses (see Figure 4.4-2).

3. An increase of less than three dBA in noise level that occurs from project-related activities would not be significant.
E3. Groundborne Vibration

Vibration is a unique form of noise where energy is carried not just through the air, but also through structures and the earth. Thus, vibration is generally felt rather than heard. Typically, ground-borne vibration attenuates rapidly as distance from the source of the vibration increases.

1. Architectural damage to structures can begin occurring when peak velocities reach 0.4 inches per second RMS (root mean square velocity, used to describe vibration amplitudes).8

2. Reactions to vibrations vary from person to person. Peak velocities of 0.01 inches per second RMS are barely noticeable to people, and velocities of 0.1 inches per second RMS are troublesome to some people. The point at which ground vibrations become troublesome to people and thus may pose an annoyance (i.e., 0.1 inches per second RMS) is used as the significance threshold within this EIR.

F. IMPACTS AND MITIGATION MEASURES

Noise-1  Construction Noise

Impact

Master Plan Buildout

Development of individual Main Campus Master Plan projects would require site preparation (i.e., grading) and construction (i.e., infrastructure, buildings and cleanup) of the proposed facilities and structures. These activities typically involve the use of heavy equipment such as tractors, loaders, and concrete mixers. Trucks would be used to deliver equipment and building materials, and to haul away waste materials. Smaller equipment such as jackhammers, pneumatic tools, saws, and hammers would also be used throughout the project site(s) during the construction phases for individual projects. This equipment would generate both steady and episodic noise that would be heard both on and off the project site(s).

The U.S. Environmental Protection Agency has compiled data regarding the noise-generating characteristics of specific types of construction equipment. It indicates that noise levels generated by heavy equipment can range from approximately 68 dBA to noise levels in excess of 95 dBA when measured at 50 feet. However, these noise levels would diminish rapidly with distance from the construction site(s) at a rate of approximately 6 dBA per doubling of distance.9

---

Noise levels generated during the construction phases for individual projects could primarily affect existing uses on the campus, nearby residences, and the adjacent Riordan High School and Lick-Wilmerding High School. Grading and construction activities, which involve the use of backhoes, tractors, scrapers, graders, and trucks, would be carried out over time in most areas of the campus. These activities could affect students, faculty, or staff utilizing classrooms, and other campus facilities (e.g., the library).

Existing sensitive receptors located closest to the campus include:

- Single-family residences on the north side of Judson Avenue, approximately 75 feet from the site of the Child Development Center;
- Riordan High School, approximately 80 feet north of the site of the Technology Center and 120 feet west of the site of the Student Health Center & Classroom Building (Health Center);
- Single-family residences west of the reservoir, more than 700 feet west of the development proposed on the reservoir and 60 feet west of the interior of the western berm (these residences would be shielded from most construction noise impacts by the western embankment, but could be exposed to noise from trucks entering the reservoir from the southwest);
- Single- and multi-family residences and Lick-Wilmerding High School on Ocean Avenue, approximately 180 feet south of the site of the Community Health & Wellness Center;
- Single-family residences on Havelock Street, approximately 200 feet northeast of the site of the parking garage; and
- Single-family residences on Marston Avenue, approximately 100 feet northeast of the site of the relocated practice field.

The loudest construction equipment that would be used during most construction activities (trucks and tractors) could result in unmitigated noise levels of about 95 dBA at the nearest off-campus receptors. Unmitigated construction noise levels on the campus could exceed 95 dBA.

Based on the geotechnical report, the campus is underlain by moderately expansive soils and some project sites could be susceptible to liquefaction. Therefore, the design of deep foundations (piers or piles) could also be included in construction plans. The use of pile drivers can result in unattenuated noise levels exceeding 100 dBA at 50 feet from the noise source. Based on the distances noted above, pile driving could result in unattenuated noise levels of about 100 dBA at the nearest off-campus receptors.

---

In general, construction noise is typically of limited duration. In the case of the Master Plan, however, multiple projects would be constructed over the next 11 years. Although construction noise would be periodic and temporary for each project and thus would occur intermittently over the Master Plan period, the number of projects and length of time involved would make the impact feel more “permanent” (and thus more annoying and disruptive). Typical construction activities would occur during daytime hours, but some activities might need to occur at night to meet the overall construction schedule. Any nighttime construction activity would occur only if a permit is granted by the City. Most nearby residents would not be expected to be at home during the daytime, but the residents that would be at home (at-home workers, retired persons, young children) could be affected temporarily by construction noise at various times during the building schedule. In addition, the campus would be in session during the daytime, and construction could occur directly adjacent to classrooms, administrative offices, or other campus facilities. If construction occurs during the nighttime, the noise could be annoying and disruptive to nearby residents. In the absence of mitigation, these potential construction noise impacts would be significant.

Near-Term Development

The construction noise impacts of the proposed near-term projects (the Community Health & Wellness Center, Health Center, Child Development, practice field relocation and reservoir berm removal/wall construction) are addressed in the analysis of Master Plan buildout above. Without mitigation, the potential construction noise impacts of the near-term projects would be significant.

Reservoir Configuration

If the MOU between CCSF and SFPUC were not approved and the Balboa Reservoir was not reconfigured, Master Plan development would occur within the southern reservoir only. Potential impacts related to noise would be similar to those described for development on the reconfigured reservoir. Development of the southern reservoir basin could expose people living west of the reservoir to higher construction noise levels than if the eastern part of the reservoir were developed.

Mitigation

The impacts to on- and off-site receptors would be lessened through implementation of feasible standard construction noise controls. These controls would reduce construction noise impacts to off-campus residences during the times most people are at home, and would reduce construction noise impacts to campus users by relocating classes away from construction sites (if needed). Depending on the type of equipment and type of control used, noise controls can also substantially reduce noise levels (by 1 dBA to 16 dBA at 50 feet).

Noise-1a: To the extent feasible, CCSF shall limit construction activity to the hours of 7:00 AM to 6:00 PM on weekdays, and 7:00AM to 5:00 PM on Saturdays and Sundays. If nighttime construction is required, CCSF shall apply for, and abide by the terms of, a permit from
the San Francisco Department of Public Works. CCSF shall require contractors to comply with the City Noise Ordinance.

**Noise-1b:** Construction contractors shall implement appropriate additional noise reduction measures that include using noise-reducing mufflers and other noise abatement devices, changing the location of stationary construction equipment, shutting off idling equipment, and notifying adjacent residences and businesses in advance of construction work. In addition, CCSF shall require the posting of signs prior to construction activities with a phone number for residents to call with noise complaints.

**Noise-1c:** For any construction activities that involve the use of pile driving, CCSF shall notify nearby residents in advance of the construction work and shall schedule pile driving when it would cause the least disturbance to neighboring uses.

**Noise-1d:** If feasible based on the soils present, CCSF shall require the use of predrilled holes for pile driving, to minimize the noise and vibration from pile driving.

**Noise-1e:** In the event that construction activities would occur for an extended period of time adjacent to classrooms, or that construction noise could not be attenuated to an acceptable level inside classrooms, CCSF shall temporarily relocate classes to a different location on campus.

**Significance After Mitigation**

If implemented, Mitigation Measures **Noise-1a** through **-1e** would substantially lessen potential construction noise impacts. However, given the overall length of construction and the potential for nighttime construction, the impacts would remain significant.

**Noise-2  **  *Groundborne Noise and Vibration*

**Impact**

The types of construction activities required for individual Master Plan projects are described under Impact Noise-1. In general, ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can achieve the audible range and be felt in buildings very close to the site. Although most of these activities would produce groundborne vibration at levels below the significance threshold for architectural impacts, they would be above the significance threshold for impacts to people (0.1 inches per second RMS) at the closest receptors. In the absence of mitigation, this potential groundborne vibration impact would be significant.
Mitigation

Noise-2a: CCSF shall provide notification to the closest receptors, at least ten days in advance, of construction activities that could cause vibration levels above the threshold.

Noise-2b: CCSF shall require construction contractors to conduct demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period.

Noise-2c: CCSF shall require construction contractors to, where possible, select demolition methods to minimize vibration (e.g., sawing masonry into sections rather than demolishing it by pavement breakers)

Noise-2d: CCSF shall require construction contractors to operate earthmoving equipment on the construction site as far away from vibration-sensitive sites as possible.

Noise-2e: If pile driving is required for a specific project, the project contractor may demonstrate (through the use of indicator piles) that the pile driving would not create vibrations exceeding 0.1 inches/second at nearby residences. If the campus can demonstrate that the expected vibration would not exceed the threshold, no further mitigation for pile driving is required.

Noise-2f: The construction contractor shall implement methods to reduce vibration, including, but not limited to, sound attenuation barriers, cut-off trenches and the use of smaller hammers.

Significance After Mitigation

If implemented, Mitigation Measure Noise-2a through –2f would substantially lessen potential construction groundborne noise and vibration impacts. However, given the overall length of construction and the potential for nighttime construction, the impacts would remain significant.

Noise-3  On-Campus Noise Levels from Traffic Noise

Impact

Master Plan Buildout

Master Plan buildout would accommodate increased enrollment, which would generate traffic and the associated noise impacts. Based on the peak-hour trip generation estimates in Section 4.3, Transportation
and Circulation, the increase in students would result in about 10,550 additional vehicle trips per day in the campus vicinity.\textsuperscript{11}

The noise prediction model results are shown in Table 4.4-3, Predicted Future Exterior Noise Levels, Roadway Segments Adjacent to Campus. These model results are based on future project plus cumulative peak-hour vehicle movements on each roadway segment, as predicted by the traffic model. As noted in the Setting, the predicted noise levels are for distances of 50 feet from the centerline of the roadway; the noise levels at the exterior of the proposed campus structures would be lower than shown. According to Table 4.4-3, the predicted noise levels along all of the adjacent roadways would be lower than 70 dBA, the State threshold for acceptable exterior noise levels for school uses. In addition, none of the roadway segments analyzed would experience an increase in noise in excess of 3 dBA. Therefore, no significant impacts related to on-site noise levels from traffic noise would occur.

Near-Term Development

The near-term projects include the Community Health & Wellness Center, Health Center, Child Development Center, practice field and reservoir berm removal/wall construction. Impacts related to on-campus noise exposure for the near-term projects are discussed above as part of full buildout under the Master Plan and would be less than significant.

Reservoir Configuration

If the MOU between CCSF and SFPUC were not approved and the Balboa Reservoir was not reconfigured, Master Plan development would occur within the southern reservoir only. Potential impacts related to on-campus noise exposure would be similar to those described for development on the reconfigured reservoir (less than significant).

Mitigation

No mitigation is required.

Significance After Mitigation

Less than significant.

\textsuperscript{11} Based on the estimated 1,055 PM peak hour trips, multiplied by a factor of 10.
### Table 4.4-3
Predicted Future Exterior Noise Levels, Roadway Segments Adjacent to Campus

<table>
<thead>
<tr>
<th>Location</th>
<th>Roadway Segment</th>
<th>Proposed Campus Use</th>
<th>Existing Leq</th>
<th>Predicted Leq (dBA)</th>
<th>Predicted Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phelan/Ocean</td>
<td>Phelan north of Ocean</td>
<td>Arts Center</td>
<td>65.2</td>
<td>67.2</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Ocean east of Phelan</td>
<td>Renovated Student Center</td>
<td>68.6</td>
<td>69.6</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Phelan</td>
<td>Arts Center</td>
<td>67.4</td>
<td>68.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Phelan/Judson</td>
<td>Phelan south of Judson</td>
<td>Health Center</td>
<td>63.9</td>
<td>64.6</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Judson east of Phelan</td>
<td>Child Development Center</td>
<td>62.6</td>
<td>63.1</td>
<td>0.5</td>
</tr>
<tr>
<td>I-280SB/Ocean</td>
<td>I-280SB north of Ocean</td>
<td>Community Health &amp; Wellness Center</td>
<td>63.0</td>
<td>64.1</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of I-280SB</td>
<td>Community Health &amp; Wellness Center</td>
<td>67.9</td>
<td>69.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Geneva/Ocean</td>
<td>Ocean east of Geneva</td>
<td>Renovated Student Center</td>
<td>66.2</td>
<td>67.4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Geneva</td>
<td>Arts Center</td>
<td>68.4</td>
<td>69.5</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Source: Impact Sciences, Inc. Noise calculations are in Appendix 4.4.

### Noise-4  Off-Campus Noise Levels from Traffic Noise

**Impact**

**Master Plan Buildout**

Master Plan buildout would accommodate increased enrollment, which would generate traffic and the associated noise impacts. Based on the peak-hour trip generation estimates in Section 4.3, Transportation and Circulation, the increase in students would result in about 10,550 additional vehicle trips per day in the campus vicinity.\(^{12}\)

The noise prediction model results are shown in Table 4.4-4, Predicted Future Exterior Noise Levels, Roadway Segments Adjacent to Off-Campus Sensitive Uses. These model results are based on future project plus cumulative peak-hour vehicle movements on each roadway segment, as predicted by the traffic model. As noted in the Setting, the predicted noise levels are for distances of 50 feet from the centerline of the roadway; the noise levels at the exterior of the off-campus uses would be lower than

---

\(^{12}\) Based on the estimated 1,055 PM peak hour trips, multiplied by a factor of 10.
shown. According to Table 4.4-4, none of the roadway segments analyzed would experience an increase in noise in excess of 3 dBA. Therefore, no significant impacts related to off-campus noise levels from traffic noise would occur.

Although the increase in traffic noise associated with the increased enrollment at CCSF would not exceed the CEQA significance threshold, the additional traffic noise could cause more annoyance in the adjacent neighborhoods. This noise would primarily be associated with students trying to find parking off campus and walking to and from their cars. The increase in activity is unlikely to be as great as the growth in students, given that the on-street parking supply is already full throughout the day and that some additional parking would be provided on campus as part of the Master Plan. However, the noise associated with any increase in students looking for parking could be considered annoying. This impact is considered as part of Impact Land Use-1 in Section 4.2, Land Use and Planning. The mitigation measures identified in that section, including implementation of TDM measures and encouragement by CCSF to enforce residential permit parking, would help somewhat to alleviate the noise and annoyance problems in the adjacent neighborhoods.

Near-Term Development

The impacts from off-site noise levels caused by increased enrollment during the near term are addressed above as part of full buildout under the Master Plan. As shown, the impacts of Master Plan buildout on traffic noise would be less than significant. Therefore, the impacts of the near-term projects would also be less than significant.

Reservoir Configuration

The potential impacts related to traffic noise would be the same as described for development on the reconfigured reservoir.

Mitigation

No mitigation is required.

Significance After Mitigation

Less than significant.
**Table 4.4-4**

Predicted Future Exterior Noise Levels, Roadway Segments Adjacent to Off-Campus Sensitive Uses

<table>
<thead>
<tr>
<th>Location</th>
<th>Roadway Segment</th>
<th>Adjacent Land Uses</th>
<th>Existing Leq</th>
<th>Predicted Leq (dBA)</th>
<th>Predicted Increase (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phelan/Ocean</td>
<td>Ocean east of Phelan (use Ocean east of Geneva)</td>
<td>Residential</td>
<td>66.2</td>
<td>67.4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Phelan</td>
<td>Residential</td>
<td>67.4</td>
<td>68.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Phelan/Judson</td>
<td>Phelan north of Judson</td>
<td>Residential</td>
<td>60.7</td>
<td>64.7</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Phelan south of Judson</td>
<td>Riordan High School</td>
<td>63.9</td>
<td>64.6</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Judson east of Phelan</td>
<td>Residential</td>
<td>62.6</td>
<td>63.1</td>
<td>0.5</td>
</tr>
<tr>
<td>I-280NB/Ocean</td>
<td>I-280NB north of Ocean</td>
<td>Balboa Park</td>
<td>63.6</td>
<td>64.4</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Ocean east of I-280NB</td>
<td>Balboa Park</td>
<td>64.5</td>
<td>65.7</td>
<td>1.2</td>
</tr>
<tr>
<td>I-280SB/Ocean</td>
<td>Ocean west of I-280SB</td>
<td>Lick-Wilmerding High School, residential</td>
<td>67.9</td>
<td>69.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Geneva/Ocean</td>
<td>Geneva South of Ocean</td>
<td>Residential</td>
<td>64.4</td>
<td>65.4</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Ocean east of Geneva</td>
<td>Residential</td>
<td>66.2</td>
<td>67.4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Ocean west of Geneva (use Ocean west of Phelan)</td>
<td>Residential</td>
<td>67.4</td>
<td>68.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Howth/Geneva</td>
<td>Howth north of Geneva</td>
<td>Residential</td>
<td>58.2</td>
<td>56.0</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Howth south of Geneva</td>
<td>Residential</td>
<td>59.6</td>
<td>60.1</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Geneva west of Howth</td>
<td>Residential</td>
<td>65.8</td>
<td>66.7</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Geneva east of Howth</td>
<td>Residential</td>
<td>64.5</td>
<td>65.5</td>
<td>1.0</td>
</tr>
<tr>
<td>I-280SB/Geneva</td>
<td>I-280SB north of Geneva</td>
<td>Lick-Wilmerding High School</td>
<td>64.0</td>
<td>64.5</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>I-280SB south of Geneva</td>
<td>Residential</td>
<td>64.1</td>
<td>64.8</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Geneva east of I-280SB</td>
<td>Residential</td>
<td>68.3</td>
<td>69.0</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Source: Impact Sciences, Inc. Calculations are in Appendix 4.4.

---

**Noise-5**  
**On-Site Noise Impacts from Sources Other Than Traffic Noise**

**Impact**

*Master Plan Buildout*

Students, faculty, staff, and community members using the campus would generate, and would be exposed to, point source noise that would include people talking, doors closing, auto alarms, landscaping equipment operation, car/personal stereos, etc. These noise levels also contribute to the ambient noise.
levels that are experienced in all urban campus areas. The presence of additional students on campus and activity at the proposed new buildings could result in higher noise levels at certain locations. Ordinary conversation generates noise levels in the 60-dBA range; therefore, the additional students walking around or hanging out on the campus would not exceed the 70 dBA, CNEL State criterion for school or auditorium/theater uses. The amount of additional noise from car doors closing, auto alarms, and personal stereos cannot be quantified because these noises would be brief and would occur intermittently throughout the day. The average daily noise levels generated by these sources would typically not exceed the 70 dBA CNEL State criterion for school or auditorium/theater uses. Therefore, these noise impacts would not be significant.

Near-Term Development

The impacts from on-site noise levels caused by increased enrollment during the near term are addressed above as part of full buildout under the Master Plan. As shown, the impacts of Master Plan buildout on other noise sources would be less than significant. Therefore, the impacts of the near-term projects would also be less than significant.

Reservoir Configuration

The potential impacts related to other noise sources would be the same as described for development on the reconfigured reservoir.

Mitigation

No mitigation is required.

Significance After Mitigation

Less than significant.

Noise-6 Off-Site Noise Impacts from Sources Other Than Traffic Noise

Impact

Master Plan

Existing residential and other noise-sensitive uses that are near the proposed development areas on the Main Campus would experience a slight change in their ambient noise environment as a result of Master Plan buildout. At some locations, existing buildings and changes in elevation would help to block the noise. Existing traffic on the surrounding roadways (particularly on Ocean Avenue) would also mask noise associated with the building operations.
The nearest single-family residences on the north side of Judson Avenue would be about 75 feet from the site of the proposed Child Development Center. A specific design for the Center has not been developed, but it is likely that the Center would include an outdoor play area for children. This area would not be used continuously and would not be used in the evenings, and the noise generated would be partly masked by the traffic along Judson Avenue. The proposed landscaping along Judson would not be thick enough to provide true noise reduction but might help to reduce perceived noise by providing a visual barrier. Although residents might be able to hear children playing, this noise would not substantially change ambient noise levels.

Riordan High School would be approximately 80 feet north of the site of the Technology Center and 120 feet west of the site of the Health Center. The noise generated by users of the Technology Center would be similar to the noise generated by students entering and leaving the high school. The Health Center would generate noise similar to an office use. Siren noise might be experienced occasionally, should treatment of a patient’s condition require transport to a hospital by ambulance. This type of situation would occur only during a health emergency and is not considered a typical noise impact from the project.

The nearest single-family residences west of the reservoir would be more than 700 feet from the development proposed on the reservoir, and would be too far from the campus to experience any perceptible change in noise levels. The single- and multi-family residences and Lick-Wilmerding High School across ocean Avenue from the Community Health & Wellness Center already experience substantial noise from the traffic along Ocean Avenue, and the minor noise generated by activity at the Community Health & Wellness Center would generally be masked by the traffic noise.

The nearest single-family residences on Havelock Street would be about 200 feet northeast of the site of the proposed parking garage. The garage would have 800 spaces on 4 levels. A design for the garage has not been developed; for this EIR, it is assumed that the garage would be open on the sides. Typical noises associated with a parking garage include car doors closing, engines starting, car acceleration, parking area cleaning and other maintenance activities, tire squeal noise (depending on the material used for the ramps and parking surfaces), and car alarms. Noise-generating activities from the garage would be the most intense during the times of the day when people are arriving at or departing from the campus. Although the eastern end of the campus already experiences substantial activity (such as students entering and leaving the gymnasiums, people using the tennis courts), the garage would result in an increase in the intensity of use, with a corresponding increase in noise levels. Current noise levels on Havelock Street near the campus are already above 60 dBA, the acceptable noise limit for single-family residences; based on measured noise levels at another parking garage, the average noise levels generated by the proposed CCSF garage would not be high enough to raise the ambient noise level noticeably. However, periodic noise from cars using the garage could be perceived by nearby residents as an annoyance.
The nearest single-family residences on Marston Avenue would be about 100 feet northeast of the site of the relocated practice field. That area of the campus already experiences substantial activity, due to the presence of the existing Child Care Center and classrooms. The practice field would not be used continuously and would not be used at night. Therefore, the noise from the practice field would not substantially change ambient noise levels in the area.

Near-Term Development

The impacts of the proposed near-term projects are addressed in the discussion of Master Plan buildout, above. None of the near-term projects would result in significant noise impacts.

Reservoir Configuration

If the MOU between CCSF and SFPUC were not approved and the Balboa Reservoir was not reconfigured, Master Plan development would occur within the southern reservoir only. Potential impacts related to noise would be similar to those described for development on the reconfigured reservoir. Use of the western half of the southern reservoir basin would result in a slight increase in ambient noise west of the reservoir.

Mitigation

No mitigation is required. However, to minimize the potential annoyance that the garage might cause, the following measures are recommended as conditions on the development of the garage:

- Enclose the sides of the garage facing nearby residences (the east and north sides);
- Use “non-squeal” pavement materials within the structure and on external ramps;
- Use speed humps within the garage to reduce vehicle speeds;
- Enclose the top level of parking or use a sound wall on the sides of the garage facing nearby residences.

Significance After Mitigation

Less than significant.

Noise-7 Impacts of Citywide Master Plan Development

Impact

As stated in the Project Description, changes at most of the other CCSF campuses would be minor, such as the remodeling of existing interior space. These changes would not result in any significant negative
noise impacts. At most of the other campuses, the proposed changes would not generate increased enrollment.

The noise impacts associated with the Mission and Chinatown/North Beach campuses have already been analyzed in certified EIRs (see Section 3.0, Project Description, for full citations of these documents). That analysis has been incorporated into this EIR by reference. For both projects, noise issues were scoped out in the Initial Studies for each project. The Initial Study for the Chinatown/North Beach campus (included in the Appendix of the 1998 EIR) noted that adherence to guidelines in the San Francisco General Plan and adherence to regulations set forth in the San Francisco Noise Ordinance, including measures to reduce pile-driving noise, would result in less-than-significant noise impacts. Likewise, the Initial Study for the Mission Campus (included in the Appendix of the 1998 EIR) concluded that the increase in traffic volume associated with the project would not cause a substantial increase in traffic noise and that temporary construction noise would not be considered significant. Therefore, since the CEQA documents for the Mission Campus and the Chinatown/North Beach Campus do not identify any significant noise impacts, and these campuses are at some distance from the Main Campus, there would be no significant cumulative impacts from Citywide Master Plan development.

Mitigation

No mitigation is required.

Significance After Mitigation

Less than significant.

4.4 Noise

Cumulative Impacts

Impact

As stated in Section 4.1, Land Use and Planning, there are no major projects within the vicinity of the Main Campus. An 9-unit apartment complex with a small amount of ground-floor retail space is under construction on Ocean Avenue several blocks west of the campus and a new library building is proposed for construction south of the west end of the Balboa Reservoir; these projects would result in a small increase in activity in the area and would not contribute noticeably to cumulative noise levels. The proposed apartments would generate about 60 vehicle trips per day; the noise associated with these trips would be imperceptible when compared with the average daily noise from 20,000 vehicles on Ocean Avenue. The relocation of the library would essentially result in a shift in activity from one site on Ocean Avenue to another. Therefore, these projects would not combine with the proposed Master Plan to generate significant cumulative noise impacts.
Construction of the library would occur in 2005 and 2006, during the same time that construction of the Community Health & Wellness Center and practice field relocation is occurring. The library site, Health & Wellness Center site, and new practice field site would be separated from each other, but there could be combined construction impacts from construction vehicles traveling the same routes. This potential cumulative impact would be significant.

The Draft Balboa Park Station Area Plan includes a recommended development program for the Phelan Loop Area. The program would include the extension of Harold, Lee, and Brighton Avenues across Ocean Avenue; relocation of the MUNI layover facility; several public open spaces; mixed-use development of up to five stories (45 to 55 feet); and possible redevelopment of the fire station/bookstore parcel near the corner of Phelan and Ocean Avenues. The Station Area Plan is still in draft form and the anticipated date of approval is unknown; no specific projects within the Phelan Loop have been formally initiated. Therefore, future use of the area is considered too speculative to analyze in detail. From a general standpoint, the extension of Lee Avenue would provide another entrance to the proposed “west campus” development and would shift some project-related traffic away from Phelan Avenue. The potential mixed-use development would generate traffic that would contribute to cumulative traffic noise in the area; the impacts of cumulative traffic noise are addressed as part of the analysis of Master Plan buildout, above.

The draft Balboa Park Station Area Plan proposes that public open space be developed on top of the western part of the Balboa Reservoir if the SFPUC uses it for water storage. Should the SFPUC determine that the reservoir is not needed or not feasible, the Plan proposes that housing and open space be developed. For reasons noted elsewhere in this EIR, any future use of the western part of the reservoir is speculative (and thus is not included in the cumulative impacts analysis). From a general standpoint and for informational purposes, development of the western part of the reservoir would result in an overall increase in the intensity of use in the area, but the noise generated by residential or open space uses would not substantially change ambient noise levels in the area. The traffic generated by uses on the western part of the reservoir would contribute to cumulative traffic noise in the area; the impacts of cumulative traffic noise are addressed as part of the analysis of Master Plan buildout, above.

Mitigation

See Mitigation Measures Noise-1a through –1e for the cumulative construction noise impact. It should be noted that most of these measures address stationary noise sources; the routes for construction trucks are limited and cannot be shifted without causing greater noise impacts.

Significance After Mitigation

Significant for the cumulative construction noise impact.
G. CONCLUSION

Impacts related to construction noise and vibration would be reduced through implementation of all feasible construction noise/vibration controls, but would remain significant after mitigation.
Figure 4.4-1, Noise Measurement Locations p 29

Figure 4.4-2, Noise/Land Use Compatibility Guidelines p 31